9MM FIELD SERVICE MANUAL

BROWNING

BROWNING FIELD SERVICE MANUAL
9MM HI-POWER

This manual is written to assist trained gunsmiths in the repair and servicing of Browning products. It should never be used by an untrained person to repair any firearm. Read the entire manual carefully and pay special attention to the portions dealing with safety.

TABLE OF CONTENTS

SECTION	DESCRIPTION	PAGE
I	DESCRIPTION AND FUNCTIONAL OPERATION	1
II	PARTS SCHEMATIC	2
III	INSPECTION AND HAND DISASSEMBLY INTO SUB-ASSEMBLIES	4
	1. Pre-Disassembly Inspection	4
	2. Slide and Frame Disassembly	4
	3. Barrel Disassembly	4
IV	DISASSEMBLY OF SUB-ASSEMBLIES INTO COMPONENT PARTS, INSPECTION AND REASSEMBLY OF SUB-ASSEMBLIES	4
	1. Disassembly of the Slide Assembly	4
	2. Inspection of Components and Reassembly of the Slide Assembly	5
	3. Disassembly of the Frame Assembly	5
	4. Inspection of Components and Reassembly of the Frame Assembly	6
	5. Final Assembly	8
	6. Final Inspection	8
V	TROUBLESHOOTING/POSSIBLE CAUSES	8
VI	SPECIAL INSTRUCTIONS	9

BROWNING FIELD SERVICE MANUAL

IMPORTANT SAFETY WARNINGS

Before carrying out any instructions given throughout this manual, be certain to read the **NOTES** and **CAUTION** notes given in regard to those instructions. Generally, these precautionary notes follow the related instructions. In any case, read all of the instructions, notes and cautions on any step involving assembly or reassembly before proceeding with that step.

SAFETY WARNING

Failure to obey a Safety Warning **CAUTION** - may result in injuries to you or to others.

Failure to obey a **NOTE** regarding the repair process may result in incorrect procedure which could cause malfunctions and/or damage to the firearm.

SAFETY WARNING

CAUTIONS:

1. Be certain the firearm is unloaded before proceeding with any service work.
2. Appropriate safety glasses should be worn by service personnel and bystanders when removing or re-installing any springs or spring-loaded components.
3. If for any reason it becomes necessary to load and discharge this firearm, it is recommended that reference be made to the Owners Manual for proper loading, handling and safety procedures. These Owners Manuals are supplied with each new firearm and extra copies may be obtained by contacting Browning, Route # 1, Morgan, Utah, 84050.
4. Read all of the instructions, cautions and notes on any step involving assembly or disassembly before proceeding with that step.
5. Section VI describes special tool which may be required and special instructions.

SECTION I

DESCRIPTION AND FUNCTIONAL OPERATION

The Browning 9mm Hi-Power is a single action, recoil operated, semi-automatic pistol.

For the purpose of functional operation explanation, assume the pistol is loaded with the Magazine installed and ready to fire.

When the Trigger is pulled, it rotates about its pin and lifts the Trigger Lever. In lifting, the Trigger Lever contacts the forward end of the Sear Lever, located in the Slide, causing it to rotate. In rotating, the rear end of the Sear Lever is moved downward to contact the Sear. Thus, sufficient Trigger pressure causes the Sear to rotate and disengage the Hammer. The Hammer, driven by the compressed coil Mainspring, rotates to drive the Firing Pin forward compressing the Firing Pin Spring and firing the chambered round.

During recoil, both the Barrel and Slide start moving together to the rear. This is due to their being locked together by two milled lugs in the top of the Slide mating cutouts in top of the Barrel. After approximately 3/16 inch movement to the rear, a Barrel Lug, located just forward of the Barrel feed ramp, comes in contact with the Cam located in the Frame just above the Trigger Assembly. When contact is made, the Barrel is cammed downward and unlocked from the Slide. The Barrel is stopped on the Cam but the inertia imparted to the Slide carries it to the rear. In moving to the rear, the Slide extracts the empty cartridge, overrides and cocks the Hammer, compresses the Mainspring and Recoil Spring and finally ejects the empty cartridge from against the Ejector.

In moving forward by action of the compressed Recoil Spring, the Slide picks up a new cartridge from the Magazine and chambers it. Approximately 3/16 inch from the Slide being completely forward, a reverse action occurs on the Barrel Cam. The Slide coming in contact with the Barrel causes it to be cammed up and into the locked position with the Slide.

If the Trigger is held to the rear throughout the cycle of firing, ejection and loading, the forward end of the Sear Lever comes to rest against the side of the Trigger Lever. The Trigger Lever cannot properly engage the Sear Lever until the Trigger has been fully released. This feature constitutes the disconnect feature of the fire control system.

When the last shot is fired (Magazine empty) the Slide is held to the rear by the Slide Stop being activated by the Magazine Follower.

The Hi-Power contains a manual Safety located on the left side of the Frame as well as a Magazine Safety mechanism. When in the "ON SAFE" position, the manual Safety provides a mechanical interference with the Sear inhibiting its rotation and disengagement with the Hammer.

With the Magazine removed, the top of the Trigger Lever is designed to rotate forward by pressure from the Magazine Safety and Magazine Safety Spring. This feature is to disalign the Trigger Lever with the Sear Lever preventing their engagement if the Trigger is pulled with the manual Safety in the "OFF SAFE" position.

SECTION II

PARTS LIST 9MM HI-POWER

PART NO.	PART NAME & MODEL
PO55520	Barrel, S-R
PO55598	Ejector, S
PO55599	Ejector, R
PO55615	Extractor, S
PO55616	Extractor, R
PO55617	Extractor Pin, S-R
PO55618	Extractor Spring, S-R
PO55620	Extractor Old Style, S
PO55624	Extractor Old Style, R
PO55545	Firing Pin, S
PO55555	Firing Pin Spring, S-R
PO55558	Firing Pin Retaining Plate, S
PO55559	Firing Pin Retaining Plate, R
PO55645	Grip Left, N
PO55651	Grip Left, L
PO55655	Grip Right, N
PO55658	Grip, SC
PO55661	Grip Right, L
PO55650	Grip Left - French Walnut, S
PO55654	Grip Left - Nacrolac Pearl, R
PO55660	Grip Right - French Walnut, S
PO55664	Grip Right - Nacrolac Pearl, R
PO55670	Grip Screw, S
PO55674	Grip Screw, R
* PO55593	Hammer (New Type), S
* PO55594	Hammer, N
* PO55595	Hammer (New Type), R
PO55597	Hammer Strut Assembly with Mainspring, Mainspring Support Pin & Nut, S-R
PO55596	Hammer Strut Pin, S-R
PO55600	Magazine Latch, S
PO55604	Magazine Latch, R
PO55608	Magazine Latch Spring, S-R
PO55610	Magazine Latch Spring Guide, S
PO55613	Magazine Latch Spring Guide, N
PO55614	Magazine Latch Spring Guide, R
* PO55695	Magazine Safety, S-R
* PO55699	Magazine Safety Spring, S-R
PO55567	Magazine Safety Pin & Trigger Spring Pin, S
PO55568	Magazine Safety Pin & Trigger Spring Pin, R
PO55540	Recoil Spring, S-R
PO55538	Recoil Spring Guide Assy. with Slide Stop Retaining Ball, Spring & Cap, S-R
* PO55680	Safety Assembly Complete, S
* PO55684	Safety Assembly Complete, R
* PO55686	Safety Assembly, N
* PO55588	Sear, S-R
* PO55625	Sear Lever, S-R
PO55626	Sear Lever Pin, S-R
PO55627	Sear Lever Pivot Old Style, S
PO55628	Sear Lever Pivot Old Style, R
PO55590	Sear Pin, S-R
PO55591	Sear Spring with Button, S-R
PO55535	Rear Sight Complete, S - Includes Sight Base, Sight Blade, Sight Leaf, Elevator Screw, Elevator Spring, Detent Pin, Leaf & Friction Pin, Windage Screws
PO55536	Rear Sight Complete, N - Includes Sight Base, Sight Blade, Sight Leaf, Elevator Screw, Elevator Spring, Detent Spring, Leaf & Friction Pin, Windage Screws
PO55537	Rear Sight Blade, N
PO55539	Rear Sight Base, N
PO55541	Rear Sight Leaf, N
PO55542	Rear Sight Elevator Screw, N
PO55543	Rear Sight Leaf Pin and Friction Pin, N
PO55544	Rear Sight Detent Pin, N
PO55546	Rear Sight Windage Screw, N
PO57337	Rear Sight Complete, Adjustable Sight Model, S
PO57341	Rear Sight Base, Adjustable Sight Model, S
PO57342	Sight Aperture, Rear, Adjustable Sight Model, S
PO57343	Sight Aperture Housing, Rear, Adjustable Sight Model, S
PO57344	Sight Aperture Housing Pin, Rear, Adjustable Sight Model, S
PO57345	Sight Elevation Screw, Rear, Adjustable Sight Model, S
PO57346	Sight Elevation Screw Spring, Rear, Adjustable Sight Model, S
PO57347	Sight Elevation Spring, Rear, Adjustable Sight Model, S
PO57349	Sight Windage Screw, Rear, Adjustable Sight Model, S
PO55521	Sight - Rear, S
PO55522	Sight - Rear, R
PO55524	Sight - Front, S
PO55526	Sight - Front - Adjustable Sight Model, S
PO55506	Slide W/Front Sight, N
PO55507	Slide W/Front and Rear Adjustable Sights, N
PO55508	Slide W/Front Sight, L
PO55509	Slide W/Front and Rear Adjustable Sights, L
PO55516	Slide W/Front Sight, SC
PO55510	Slide W/Front Sight, S
PO55511	Slide - Military Sight Model
PO55512	Slide - Adjustable Sight Model, S
PO55513	Slide W/Front Sight, R
PO55514	Slide W/Front Sight, R
PO55649	Slide Stop, N
PO55652	Slide Stop, S
PO55653	Slide Stop, R
* PO55570	Trigger, S
* PO55574	Trigger - Gold Plated, R
* PO55561	Trigger Lever, S-R
PO55562	Trigger Pin, S
PO55563	Trigger Pin, R
PO55575	Trigger Spring, S-R

S - Standard R - Renaissance N - Nickel

SC - Silver Chrome L - Louis XVI

** Indicates part must be fitted by Browning Service Department or qualified gunsmith.*

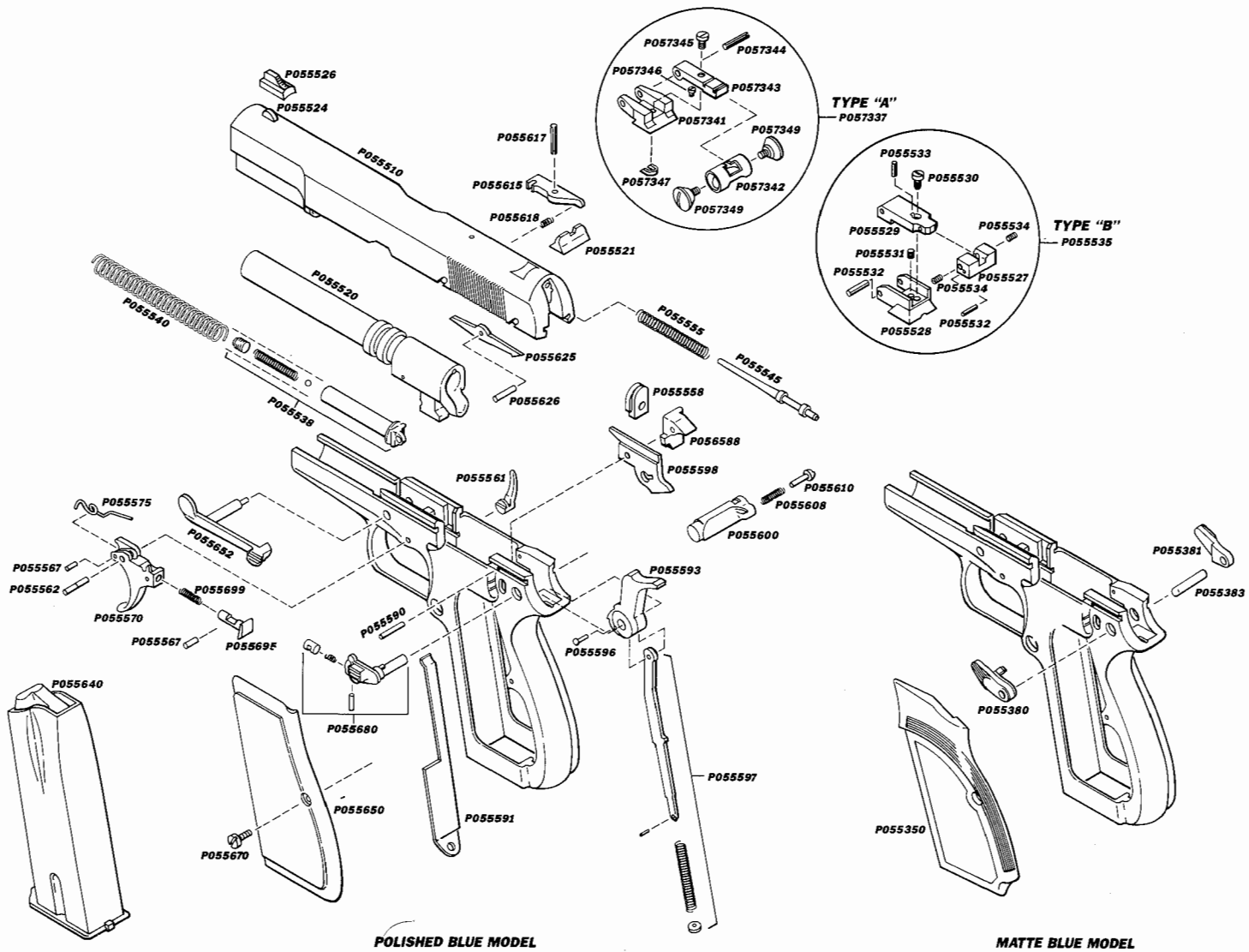
NOTE: Unless otherwise indicated, part is interchangeable between gauges/calibers.

S - Standard R - Renaissance N - Nickel

SC - Silver Chrome L - Louis XVI

** Indicates part must be fitted by Browning Service Department or qualified gunsmith.*

NOTE: Unless otherwise indicated, part is interchangeable between gauges/calibers.



POLISHED BLUE MODEL

MATTE BLUE MODEL

SECTION III

INSPECTION AND HAND DISASSEMBLY INTO SUB-ASSEMBLIES

1. PRE-DISASSEMBLY INSPECTION

SAFETY WARNING **CAUTION:** Make certain the pistol is unloaded before any inspection or disassembly operations are performed.

A. With the Magazine removed, Hammer fully cocked and the Safety in the "OFF SAFE" position, pull the Trigger and observe the Hammer **will not** fall.

SAFETY WARNING **CAUTION:** Due to the creation of a potentially unsafe condition, the Magazine Safety should never be removed or made inoperable. It is the policy of the Browning Arnold Service Center to replace the Magazine Safety on any 9mm received for service had it been previously removed.

It is recommended this same policy be followed by outside service centers or by those persons performing repairs on the 9mm.

B. To simulate firing and with the Magazine removed, retract the Slide smartly, release and let it slam forward. Repeat this procedure at least six times and observe the Hammer does not jar off the full cock position.

C. With the Hammer fully cocked, install the Magazine and observe the Hammer will fall when the Trigger is pulled.

D. Check the Trigger pull for a let-off force of 7 to 10 lbs.

E. With the Hammer fully cocked and the Safety in the "ON SAFE" position, pull the Trigger as hard as possible with the index finger of both hands, and observe the Sear does not disengage or partially disengage the Hammer.

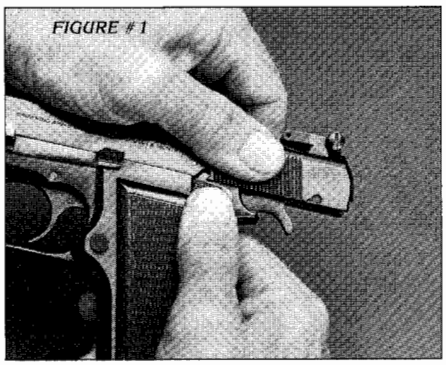
SAFETY WARNING **CAUTION:** If the pistol fails any of the inspection criteria given above, necessary repairs must be accomplished in order to correct those discrepancies or return the pistol to the Arnold Service Center.

2. SLIDE AND FRAME DISASSEMBLY

With the pistol completely assembled, depress the Magazine Latch and remove the Magazine.

Holding the pistol in the right hand, push the Slide Assembly to the rear and lock it there by engaging the Safety in the center recess on the left side of the Slide. See Figure #1.

FIGURE #1



Hold the rear end of the Slide Stop upward with the thumb of the left hand and with the index finger of the right, push the pin of the Slide Stop partially through the Frame. See Figure #2.

FIGURE #2

Lay the pistol on its right side and remove the Slide Stop by lifting it straight out using both hands.

NOTE: Use care not to scratch the Slide with the sharp corner on the rear end of the Slide Stop.

With the Slide in the left hand and the grip in the right, apply slight rearward pressure on the Slide and rotate the Safety downward with the right thumb.

Remove the Slide by slowly letting it move forward and off the Frame.

SAFETY WARNING **CAUTION:** Use care not to let the Slide Assembly release from your grasp.

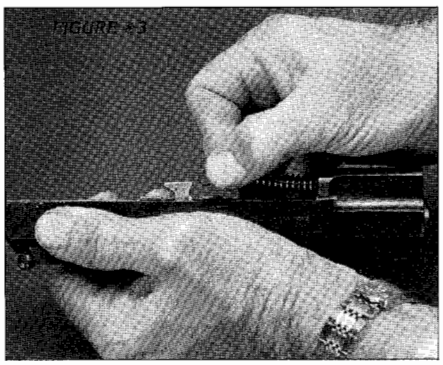
3. BARREL DISASSEMBLY

Hold the Slide in the inverted position in the left hand. With the right hand, compress the Recoil Spring with the Recoil Spring Guide and remove both pieces. See Figure #3.

SAFETY WARNING **CAUTION:** Use care not to let the Recoil Spring Guide escape your grasp.

Lift the chamber end of the Barrel upward and remove the Barrel from the Slide Assembly.

FIGURE #3



SECTION IV

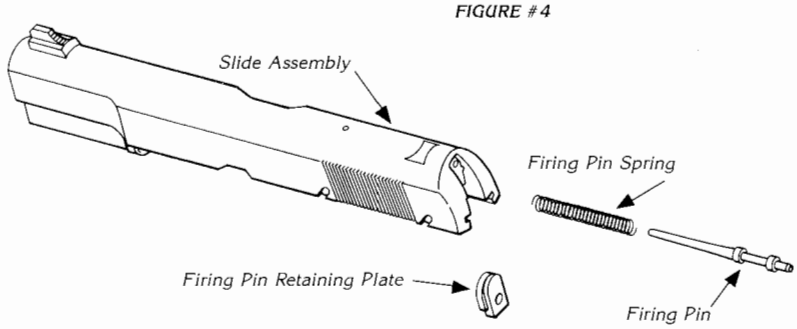
DISASSEMBLY OF SUB-ASSEMBLIES INTO COMPONENT PARTS, INSPECTION AND REASSEMBLY OF SUB-ASSEMBLIES

SAFETY WARNING **CAUTION:** Do not alter, lighten or substitute any springs during reassembly in order to lighten the Trigger pull. This could result in an unsafe pistol.

1. DISASSEMBLY OF THE SLIDE ASSEMBLY (Figure #4)

A. FIRING PIN AND SPRING

FIGURE #4



Using a 1/8" punch, or the pin of the Slide Stop, press the Firing Pin forward in the Slide and remove the Firing Pin Retaining Plate at the rear of the Slide.

SAFETY WARNING **CAUTION:** Keep a thumb over the end of the Slide to retain the Firing Pin. Personal injury could

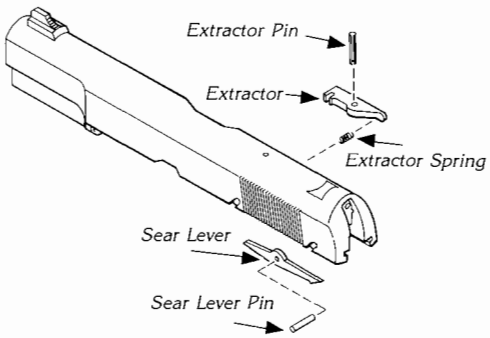
result if the Firing Pin is allowed to fly out of the Slide.

Remove the Firing Pin and Firing Pin Spring.

B. SEAR LEVER AND EXTRACTOR

NEW MODELS (Extractor slot on exterior of Slide) Figure #5

FIGURE #5



1. SEAR LEVER

First remove the Sear Lever by removing the Sear Lever Pin with a 3/32" punch from the left side of the Slide to the right.

2. EXTRACTOR

Remove the Extractor and Extractor Spring by removing the Extractor Pin with a 1/16" punch from the top of the Slide to the bottom.

OLD MODELS (Extractor internal to Slide)

1. EXTRACTOR

After removal of the Firing Pin Retaining Plate, the Extractor may be removed by pushing it to the rear and prying it out of the Slide.

2. SEAR LEVER

After removal of the Extractor, remove the Sear Lever by prying out the Sear Lever Pin from the radiused hole in the bottom of the Slide.

C. SIGHTS

The rear sights may be removed by driving out from left to right with the use of a brass punch to prevent damage.

The front sights are silver soldered on all models. The blade sight fits in a milled groove in the top of the Slide. The front sight on the Sport Model is soldered on top of the Slide with no groove.

2. INSPECTION OF COMPONENTS AND REASSEMBLY OF THE SLIDE ASSEMBLY

A. INSTALLATION OF THE EXTRACTOR AND SEAR LEVER

NEW MODELS

1. EXTRACTOR

Install the large end of the Extractor Spring in its hole in the Slide.

Position the Extractor for installation and align the holes by inserting a 1/16" punch from the top of the Slide.

Install the Extractor Pin from the bottom of the Slide and drive flush.

Ascertain the Extractor works freely when its rear end is depressed and released.

2. SEAR LEVER

Position the Sear Lever for installation with the small slender end forward in the Slide.

Align the holes with a 3/32" punch inserted from the left side of the Slide and install the Sear Lever Pin from the right.

NOTE: Do not install the Sear Lever Pin in too far so as to extend into the Extractor slot of the Slide.

OLD MODELS

1. SEAR LEVER

Position the Sear Lever for installation with the small slender end forward in the Slide.

Install the Sear Lever Pin.

2. EXTRACTOR

After installation of the Sear Lever Pin, install the Extractor from the rear end of the Slide.

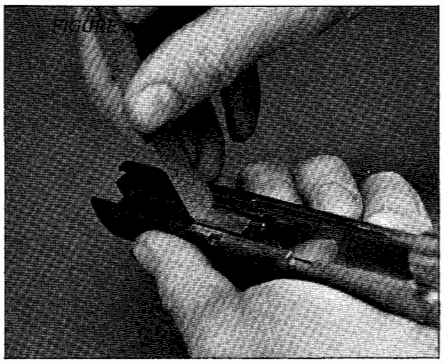
NOTE: The Extractor will be retained in the Slide by the Firing Pin Retaining Plate.

B. INSPECTION OF THE SEAR LEVER INSTALLATION (OLD & NEW MODELS)

Hold the Slide level and inverted in one hand and rub a straight edge over the Sear Lever Pin with the other as shown in Figure #6. This procedure is to determine if the Sear Lever protrudes beyond the surface of the Slide directly over the Sear Lever Pin.

SAFETY WARNING

CAUTION: If the Sear Lever protrudes beyond the surface of the Slide, the Sear Lever must be removed and relieved with a file at that point. Failure to remove any interference that may exist could possibly cause the pistol to double when firing.



C. INSPECTION AND INSTALLATION OF THE FIRING PIN AND SPRING

SAFETY WARNING

CAUTION: A production change was made in 1972 to the Firing Pin Spring. The old spring had a wire diameter of approximately .024". The new spring is approximately 1/8" longer and is made of .030" diameter wire. If the pistol being repaired contains the old configured spring, it should be updated to the new.

Grip the Slide in a padded vise and position the Firing Pin and Spring for installation. Compress the Firing Pin Spring and Pin with a small blade screwdriver and install the Firing Pin Retaining Plate.

SAFETY WARNING

CAUTION: Use extreme care not to let the Firing Pin fly out of the Slide or serious personal injury could result.

NOTE: When attempting to install the Firing Pin Retaining Plate, make sure the plate is oriented properly with the Slide.

D. BARREL, RECOIL SPRING GUIDE ASSEMBLY AND RECOIL SPRING

Position the Barrel in the Slide and install the Recoil Spring Guide Assembly and Recoil Spring in reverse order of disassembly.

NOTE: Make sure the small flat area on the rear end of the guide is positioned downward as installed in the pistol. This will result in the Recoil Spring Guide Assembly being seated parallel to the Barrel.

3. DISASSEMBLY OF THE FRAME ASSEMBLY

A. SEAR, SEAR SPRING AND PIN

Remove the Grip Plates, cock the

Hammer fully and install the Special Tool described in Section VI of this manual to retain Hammer in the cocked position. (See Figure #7)

Remove the Sear Pin with a 3/32" punch and remove the Sear and Sear Spring. (See Figure #8)

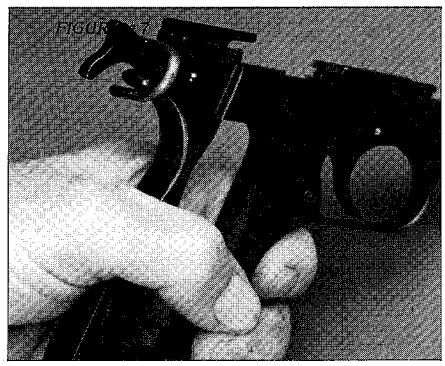
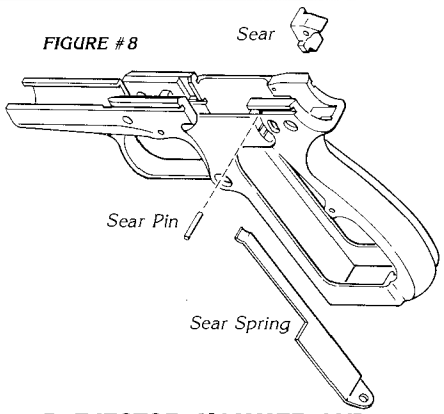


FIGURE #8

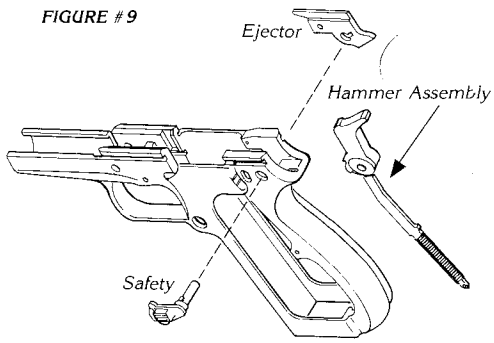


B. EJECTOR, HAMMER AND SAFETY ASSEMBLIES (Figure #9)

Retain the Hammer with the thumb, remove the Special Tool and slowly lower the Hammer.

Rotate the Ejector 90 degrees downward.

FIGURE #9



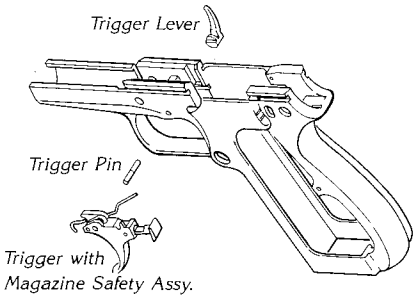
Make sure the Safety is in the "OFF SAFE" position and remove it by pushing its pin through the Frame from the right side.

After removal of the Safety Assembly, remove the Ejector and Hammer Assembly.

Further disassembly of the Hammer Assembly should not be required.

C. TRIGGER WITH MAGAZINE SAFETY ASSEMBLY (Figure #10)

FIGURE #10



Remove the Trigger Pin from right to left with a 3/32" punch.

Place pressure on the Trigger and Magazine Safety with the index finger and thumb and remove the Trigger Lever from out of the top of the Frame.

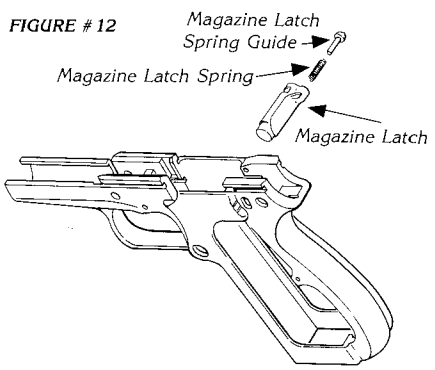
Remove the Trigger Assembly from out of the Trigger Guard by depressing the Magazine Safety as shown in Figure #11.

NOTE: Further disassembly of the Trigger Assembly should not be required except for refinishing.

D. MAGAZINE LATCH ASSEMBLY (Figure #12)

Push the Magazine Latch fully from left to right and hold it with the

FIGURE #12



middle finger of the left hand. With a small blade screwdriver in the other hand, turn the Magazine Latch Spring Guide counter-clockwise 90 degrees to a locked-in-depressed position. The Magazine Latch Assembly can then be lifted out of the Frame.

NOTE: Disassembly of the Magazine Latch Assembly should not be necessary except for refinishing.

E. CAM (Part No. PO55515)

The only part remaining on the Frame is the Cam. Its installation, obviously, is permanent. However, if the Cam is ever broken, and on occasion this may occur with very extensive usage of the pistol, it is replaceable. The replacement of the Cam is discussed in Section VI of this manual.

4. INSPECTION OF COMPONENTS AND REASSEMBLY OF THE FRAME ASSEMBLY

A. INSTALLATION OF THE MAGAZINE LATCH ASSEMBLY

Insert the Magazine Latch Assembly into the right side of the Frame.

With the middle finger of the left hand, hold the Magazine Latch flush with the left side of the Frame.

With a small blade screwdriver, turn the Magazine Latch Spring Guide clockwise 90 degrees to lock the Assembly in the Frame.

B. INSTALLATION OF THE TRIGGER WITH MAGAZINE SAFETY ASSEMBLY

Insert the Trigger Assembly (less the Trigger Lever) up through the Trigger Guard as shown in Figure #11 during disassembly.

Position the Trigger Lever in the Trigger Assembly with its small stud located to the left, and the Trigger Spring positioned in the groove in the center of the Trigger Lever.

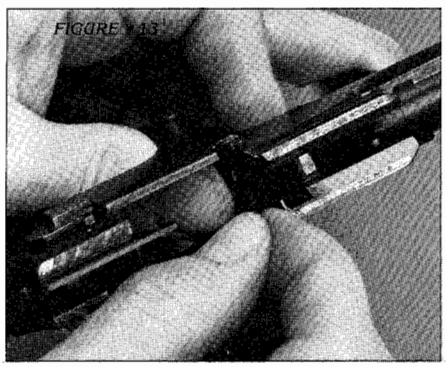
Simultaneously, the forward end of the Trigger Spring must be positioned in the radiused cutout at the forward end of the Trigger Slot in the Frame and retained there.

With the parts in the relationship described above, put pressure on the Trigger and Magazine Safety with the thumb and index finger as shown in Figure #13 and maintain this pressure.

With the other hand, pull back on the Trigger Lever to properly position the Trigger Lever in the Trigger, also shown in Figure #13.

Still holding pressure on the Trigger and Magazine Safety, push forward on the Trigger Lever and position it in its slot on the right side of the Frame.

FIGURE # 13



Still maintaining pressure on the Trigger and Magazine Safety, align the holes of the Trigger and Frame and install the Trigger Pin from left to right.

C. TRIGGER AND MAGAZINE SAFETY INSPECTION PROCEDURE

If the installation is correct, the top of the Trigger Lever will be slightly below flush with the top of the Frame with the Trigger relaxed.

> **NOTE:** If a new Trigger Lever was fitted to the pistol, its top end may have to be shortened. After properly installed, the top end of the Trigger Lever must be adjusted to slightly below the level of the top of the Frame with the Trigger relaxed.

The Trigger Lever will also be spring-loaded against the forward edge of the slot in the right side of the Frame. If it is not, check for the following:

1. Incorrect reassembly.
2. Burrs in the Magazine Safety mechanism on the side of the Frame contacting the Trigger Lever, or on the Trigger Lever.
3. Magazine Safety button dragging in its slot in the Frame.

If any of these conditions exist, they MUST be corrected before proceeding.

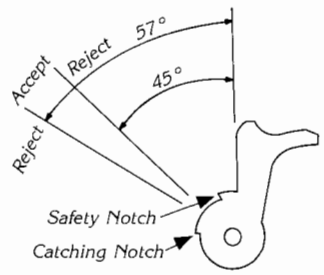
Insert the Magazine fully into the grip and observe the Trigger Lever will move rearward along the slot in the Frame.

Slowly remove the Magazine and observe the Trigger Lever will move forward against the slot in the Frame.

D. INSPECTION OF THE HAMMER ASSEMBLY

Inspect the full cock notch of the Hammer for the proper angle. The notch must not show signs of alteration and must be machine ground to within the limits of 45 degrees to 57 degrees indicated by Figure # 14.

FIGURE # 14



The Hammer may be positioned on the outline of Figure # 14 and the angle of the catching cock notch compared to the "ACCEPT" and "REJECT" lines. To aid in this comparison, a 5X eye loupe should be used.

SAFETY WARNING

CAUTION: If the angle of full cock notch falls out of this range, the Hammer must be replaced and not altered. Do not attempt to alter the Hammer.

E. INSTALLATION OF THE EJECTOR, SAFETY AND HAMMER ASSEMBLY

Position the Hammer Assembly in the Frame and engage the top of the Mainspring under the shoulder at the rear of the grip.

Position the Ejector to the left of the Hammer with it rotated 90 degrees from final orientation.

Align the holes of the Frame, Ejector and Hammer.

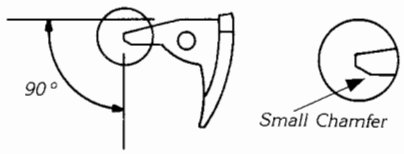
Insert the Safety for installation, orient it to the "OFF SAFE" position and snap it into final position.

Rotate the Ejector to final position, retract the Hammer and install the Special Tool to keep the Hammer fully retracted.

F. SEAR AND SEAR PIN INSPECTION PROCEDURE

1. Inspect the Sear with a 5X eye loupe for a proper searing surface. It must not show signs of being filed or excessively polished. The searing surface must be perfectly flat and 90 degrees from the small flat surface on top of the Sear as indicated by Figure # 15.

FIGURE # 15



SAFETY WARNING

CAUTION: Replace the Sear if it does not meet the criteria given above and if the searing surface is only slightly rounded or has been filed or ground back even by a slight amount.

2. Inspect the Sear Pin for any signs of wear and replace if worn or bent.

SAFETY WARNING

CAUTION: Installation of a bent Sear Pin may result in the pistol discharging if the Hammer was to drop from the full cock to the half cock position (newer models).

3. Inspect the Sear and see that when it is installed on the Sear Pin that it does not have excessive play, i.e. the hole in the Sear is not excessively large for the pin. (Seldom is this a cause for concern and only on older models.)

   If the Trigger pull was higher than the Browning specifications of 7 to 10 lbs., it may be reduced by approximately 2 lbs. by slightly chamfering the lower edge of the Sear, also shown in Figure # 15.

SAFETY WARNING

CAUTION: Do not make the chamfer so large so as to reduce the contacting surface with the Hammer notch when in the full cocked position, i.e. the chamfer should not extend over the undercut in the Hammer's full cock notch.

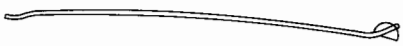
G. SEAR SPRING INSPECTION PROCEDURE

Inspect the Sear Spring for proper configuration. It must not show signs of being straightened. It should be compared to the tracing given in Figure # 16.

SAFETY WARNING

CAUTION: If the Sear Spring is not to the configuration shown in Figure # 16, it should be replaced and not re-sprung to shape.

FIGURE # 16

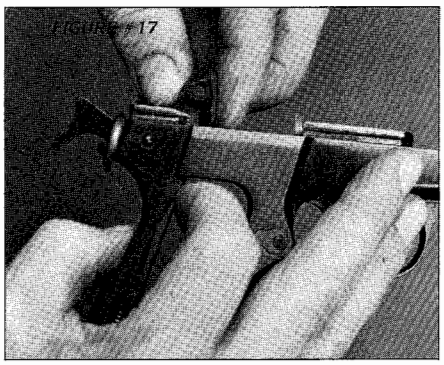


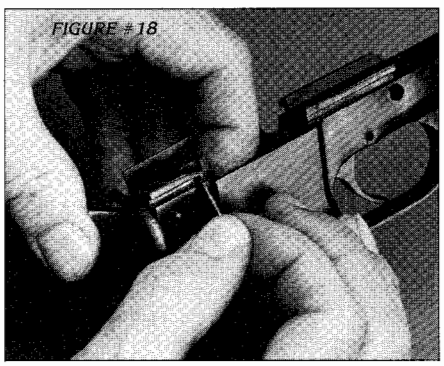
H. INSTALLATION OF THE SEAR SPRING, SEAR AND PIN

Position the Sear Spring for installation with its stud in the hole at the bottom of the grip.

With the index finger and thumb of one hand, compress the Sear Spring and position the Sear for installation with the other hand as shown in Figure # 17.

Align the holes of the Frame and Sear and install the Sear Pin as shown in Figure # 18.



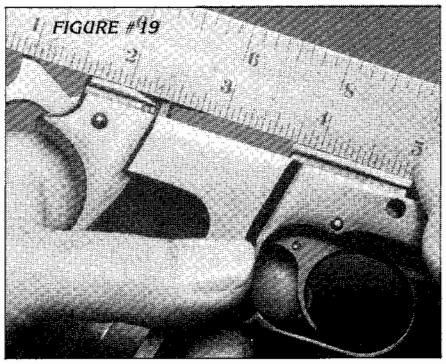


NOTE: Be sure to center the Sear Pin with the Frame.

Retract the Hammer slightly and remove the Special Tool.

I. SEAR INSTALLATION INSPECTION PROCEDURE

With the Hammer in full cocked position, place a straight edge across the top of the right hand rail of the Frame and over the small tab on top of the Sear as shown in Figure # 19.



Inspect for clearance between the small tab on top of the Sear and the straight edge.

SAFETY WARNING

CAUTION: If interference exists, remove the Sear, after first installing the Special Tool, and remove a small amount of material from the small tab to effect clearance with the straight edge. Interference between the Sear and Slide may cause the gun to double when fired.

5. FINAL ASSEMBLY

Position the Slide on the Frame, retract it and lock it into the retracted position by rotating the Safety into the middle notch on the left side of the Slide.

Lay the pistol on its right side.

Using both hands, install the Slide Stop guiding the rear end of the stop into its recess in the Slide and Frame.

NOTE: Use care not to let the rear end of the Slide Stop scratch the Slide.

Put backward pressure on the Slide, rotate the Safety downward and release the Slide.

Install the Grip Plates and Grip Plate Screws.

6. FINAL INSPECTION

Refer to Section III and perform the Pre-Disassembly Inspection procedures given in Paragraph 1 in its entirety.

SECTION V

TROUBLESHOOTING/POSSIBLE CAUSES

SAFETY WARNING

CAUTION: Make sure the pistol is unloaded before performing any troubleshooting.

1. FEEDING PROBLEMS

A. Improper ammunition. Malfunctions may occur with 90 and 100 grain hollow point ammunition. It is recommended full jacketed bullets of no less than 115 grains be used.

B. Improper hand loaded ammunition.

C. Magazine Follower Spring weak.

2. EJECTION PROBLEMS

A. Weak Extractor Spring (new model).

B. Bent Extractor (old model).

C. Extractor binding on the Extractor Pin (new model).

D. Extractor engagement surface worn and not sharp. Sharpen with file or replace.

3. SAFETY DIFFICULT TO OPERATE

A. Check the Safety Spring and Plunger for free movement.

B. Check for smoothness at the end of the Safety Plunger and the indent hole where it rides in the Frame.

C. Burrs between the Safety and the Sear at the tab on the forward left side of the Sear.

D. Check for smoothness and burrs at the Safety and Ejector contact point.

4. POOR GROUPING

A. Muzzle may need re-crowning.

B. On fixed sight models it may be necessary to file the front sight to raise the point of impact.

5. HAMMER JARS OFF THE FULL COCK POSITION AND IS CAUGHT BY SAFETY NOTCH

A. Weak or sprung Sear Spring.

B. Trigger pull too light - improper searing surfaces.

C. Interference with the top of the Sear and the Slide.

D. Interference with the Sear Lever at the pivot point with the Sear.

E. Worn or bent Sear Pin.

F. Trigger Lever improperly fit and extends too high in the Frame. This may cause the Hammer to fall from the full cock position when installing the Magazine.

6. PISTOL FIRES WHEN HAMMER FALLS TO HALF COCK POSITION (Newer Models)

A. Bent or worn Sear Pin.

B. Sear not to specification, i.e. engaging surface of the Sear ground or filed back.

C. Hammer half cock notch has been altered.

SECTION VI

SPECIAL INSTRUCTIONS

1. RECOMMENDED POINTS OF LUBRICATION DURING REASSEMBLY

The use of Browning Ultra Fine Gun Oil is recommended in the following areas. Always use oil sparingly.

A. Magazine Safety mechanism.

B. Magazine Latch Assembly.

C. Recoil Spring Guide Assembly.

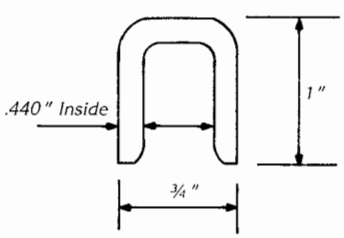
D. Safety Assembly.

E. External surfaces.

2. SPECIAL TOOLS

A special tool to disassemble and reassemble the gun may be made from a No. 12 common nail as depicted in Figure #20.

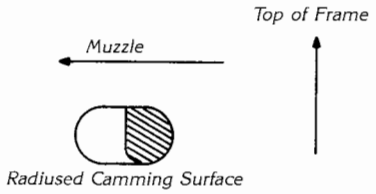
FIGURE #20



3. REPLACEMENT OF THE CAM (P/N PO55515)

Tap the broken pieces of the Cam out of the Frame. Position the new Cam in the Frame making sure it is oriented properly. A cross section of the Cam should appear in the pistol as shown in Figure #21.

FIGURE #21



With the Cam properly positioned and centered in the Frame, place the assembly in a large machinist vice and upset both ends of the Cam.

Remove the assembly and, using an anvil and hammer, carefully work the ends of the Cam to flow metal into the recesses on each side of the Frame.

> **NOTE:** The metal of the Cam must be flowed gently with light hammer taps to avoid work hardening and brittleness of the Cam.

File both ends of the Cam to the side surfaces of the Frame. Finish with 320 grit emery cloth, polish and reblue.

4. SAFETY REPLACEMENT PROCEDURE

The Sear and/or Safety must be replaced if the Sear and Hammer are allowed only to partially disengage when pulling the Trigger with the Safety in the "ON SAFE" position.

Generally, a new Sear and Safety are compatible requiring no adjustment after installation. Occasionally it may be necessary to tap the Safety to the "ON SAFE" and "OFF SAFE" positions a few times with a rawhide mallet to "wear in" the mating surfaces.

If working the Safety "ON" and "OFF" fails to free the Safety up sufficiently, remove the Safety and slightly polish the Sear bearing surface and reinstall.

In the disassembly and reassembly of the pistol, follow the procedures given in Sections III and IV and Final Inspection Procedures given in Section IV, Para. 6.